

WHAT IS CLAIMED IS :

1. Method for driving a display device having a plurality
5 of luminous elements including the steps of

addressing those luminous elements which have to be ac-
tivated for one complete frame period or a part of it,
called activation cycle or sub-field, by applying an ad-
10 dressing impulse having a predetermined writing voltage
to each of them, and

controlling the light output of at least one of said ad-
dressed luminous elements on the basis of the energy of
15 said addressing impulse.
2. Method according to claim 1, wherein at least one of
said addressed luminous elements is activated in said
one frame period by only said addressing impulse.
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3. Method according to claim 1, wherein at least one of
said addressed luminous elements is activated in said
one frame period by said addressing impulse and at least
one sustain impulse having a predetermined sustain volt-
25 age.
4. Method according to claim 1, wherein the activation en-
ergy of the one addressing impulse is smaller than that
of one sustain impulse.
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5. Method according claim 1, wherein the activation of one
of said luminous elements for one frame period is per-
formed by a plurality of activation cycles and an eras-
ing operation is performed at the end of each activation
35 cycle.

6. Method according to claim 5, wherein said addressing operation is performed at the begin of each activation cycle and optionally a sustain operation is performed after the addressing operation.
- 5 7. Method according to claim 1, further including the step of performing a picture analysis for a decision of using that addressing impulse for controlling the light output of several of said addressed luminous elements.
- 10 8. Method according to claim 7, wherein said addressing impulse is used for controlling the light output in case of essentially white pictures having reduced maximal brightness.
- 15 9. Method according to claim 7, wherein said addressing impulse is used for controlling the light output if the brightness of the present frame is lower than a predetermined threshold or the statistical distribution of luminance shows major dark regions.
- 20 10. Method according to claim 9, wherein said threshold is lower than 10% of maximum brightness.
- 25 11. Apparatus for driving a display device having a plurality of luminous elements with

addressing means for addressing at least one of said luminous elements for one complete frame period or a part
30 of it called activation cycle, by applying an addressing impulse having a predetermined writing voltage to each of said luminous elements, and

controlling means connected to said addressing means for
35 controlling the light output of each of said luminous elements to be addressed by applying at least one sustain impulse having a predetermined sustain voltage,

characterized in that

5 the light output of at least one of said luminous elements to be addressed is controllable by said controlling means also on the basis of the energy of said addressing impulse from said addressing means.

10 12. Apparatus according to claim 11, wherein at least one of said luminous elements to be addressed is activatable in said one frame period by only said addressing impulse.

15 13. Apparatus according to claim 11, wherein at least one of said addressed luminous elements is activatable in said one frame period by said addressing impulse and at least one sustain impulse.

20 14. Apparatus according to claim 11, wherein the activation energy of said addressing impulse is lower than that of one sustain impulse.

25 15. Apparatus according to claim 11, wherein the light output of each of said addressed luminous elements is controllable by said controlling means for one frame period by a plurality of activation cycles and an erasing operation at the end of each activation cycle.

30 16. Apparatus according to claim 15, wherein the light output of each of said addressed luminous elements is controllable by said controlling means by applying an addressing impulse at the beginning of said activation cycle followed by an optional sustain impulse.

35 17. Apparatus according to claim 11, including analysing means for analysing a picture to be displayed, said analysing means being connected to said controlling means so that the light output is controllable on the basis of

the picture analysis.

18. Apparatus according to claim 17, wherein said controlling means includes threshold means so that the light
5 output of each of said luminous elements to be addressed
is controllable on the basis of the energy of the corresponding addressing impulse if the brightness of a frame
analysed by said analysing means is lower than a predetermined threshold or the statistical distribution of
10 luminance shows major dark regions.